



1645

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of **Hugo Gramajo, et al.**
Application No. 10/045,612
Attorney Docket No. 0380-P02327US1
Filed: October 23, 2001
For: ANTIBIOTIC PRODUCTION (II)
Examiner: Not yet assigned
Group Art Unit: 1645

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CERTIFICATE OF MAILING UNDER 37 C.F.R § 1.8(a)

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August 1, 2003
Date of Certificate

Lynn C. Fischer
Lynn C. Fischer

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97**

In compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, Applicants are submitting herewith a Form PTO-1449 and a copy of the references listed thereon. This Information Disclosure Statement is being filed more than three months after the filing date, but before receipt of the first Official Action on the merits. Thus, it is believed by the undersigned attorney that no fee is required under 37 C.F.R. §1.97(b).

In the event that a fee is required, the Commissioner is authorized to charge Deposit Account No. 04-1406 of the undersigned attorneys. A duplicate copy of this sheet is enclosed.

In the opinion of the undersigned, the references submitted herewith are the most pertinent of which the undersigned is aware. However, no representation is made or intended that more pertinent references do not exist.

This submission is not an admission that the references listed on the attached Form PTO-1449 constitute prior art against the claims of this application.

The Examiner is respectfully requested to confirm receipt and consideration of the cited references by initialing and returning a copy of the attached Form PTO-1449 in accordance with MPEP §609.

Early and favorable consideration of this application is respectfully requested.

Respectfully submitted,

DANN, DORFMAN, HERRELL & SKILLMAN
A Professional Corporation
Attorneys for Applicant(s)

By Patrick J. Hagan
Patrick J. Hagan
Registration No. 27,643

Telephone: (215) 563-4100

Facsimile: (215) 563-4044

Enclosures - Form PTO-1449

Copies of references listed on PTO - 1449



INFORMATION DISCLOSURE STATEMENT

SHEET 1 OF 5

Complete if known

Application Number: US 10/045,612

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UNITED STATES PATENT DOCUMENTS

| EXAMINER'S INITIALS | CITE NO. | PATENT NUMBER | ISSUE DATE MM-DD-YYYY | FIRST NAMED INVENTOR |
|---------------------|----------|----------------|--------------------------|----------------------|
| | A1 | US 5 639 949 A | 06-17-1997 | Ligon James M |

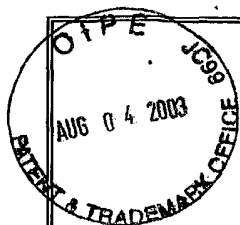
FOREIGN PATENT DOCUMENTS

| EXAMINER'S INITIALS | CITE NO. | DOCUMENT NUMBER | COUNTRY OR REGION | DATE OF PUBLICATION MM-DD-YYYY | FIRST NAMED INVENTOR OR APPLICANT |
|---------------------|----------|-----------------|-------------------|-----------------------------------|-----------------------------------|
| | B1 | WO 91 10739 A | PCT | 07-25-1991 | Cetus Corp |
| | B2 | WO 96 00282 A | PCT | 01-04-1996 | Merck & Co Inc |
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OTHER PRIOR ART - NON-PATENT DOCUMENTS

| EXAMINER'S | CITE | Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, |
|----------------------|------|---|
| EXAMINER'S SIGNATURE | | DATE CONSIDERED |

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.



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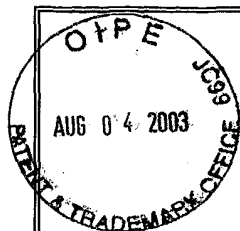
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| INITIALS | NO. | magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published |
|----------|-----|--|
| | C1 | An, J H et al (1998) Eur J Biochem 257: 395-402 "A gene cluster encoding malonyl-CoA decarboxylase (MatA), malonyl-C A synthetase (MatB) and a putative dicarboxylate carrier protein (MatC) in Rhizobium trifolii |
| | C2 | Behal, V et al (1977) Phytochemistry 16: 347-350 "Alternate Pathways of MalonylcoA Formation in Streptomyces aureofaciens" |
| | C3 | Bierman, M et al (1992) Gene 116: 43-49 "Plasmid cloning vectors for the conjugal transfer of DNA from Escherichia coli to Streptomyces spp." |
| | C4 | Bloch, K and Vance, D (1977) Annu Rev Biochem 46: 263-298 "Control Mechanisms in the Synthesis of Saturated Fatty Acids" |
| | C5 | Bramwell, H et al (1996) Microbiol 142: 649-655 "Propionyl-CoA carboxylase from Streptomyces coelicolor A3(2): cloning of the gene encoding the biotin-containing subunit" |
| | C6 | Bramwell, H et al (1993) Biochem J 293: 131-136 "Phosphoenolpyruvate carboxylase from Streptomyces coelicolor A3(2): purification of the enzyme, cloning of the ppc gene and over-expression of the protein in a streptomycete" |
| | C7 | Brownsey, R W et al (1997) Biochem Soc Trans 25: 1232-1238 "Isoforms of acetyl-CoA carboxylase: structures, regulatory properties and metabolic functions" |
| | C8 | Buttner, M J et al (1990) J Bacteriol 172: 3367-3378 "Cloning, Disruption, and Transcriptional Analysis of Three RNA Polymerase Sigma Factor Genes of Streptomyces coelicolor A3(2)" |
| | C9 | Cole, S T et al (1998) Nature 393: 537-544 "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence |

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|-----|---|
| C10 | Donadio S et al (1996) Mol Microbiol 19: 977-984 "Erythromycin production in Saccharopolyspora erythraea does not require a functional propionyl-CoA carboxylase" |
| C11 | Doukhan L et al (1995) Gene 165: 67-70 "Genomic organization of the mycobacterial sigma gene cluster" |
| C12 | Erfle J D (1973) Biochem Biophys Acta 316: 143-155 "Acetyl-CoA and Propionyl-CoA Carboxylation by Mycobacterium Phlei Partial Purification and Some Properties of the Enzyme" |
| C13 | Gramajo H C et al (1993) Molecular Microbiology 7: 837-845 "Stationary-phase production of the antibiotic actinorhodin in Streptomyces coelicolor A3(2) is transcriptionally regulated" |
| C14 | Harwood J L (1988) Annu Rev Plant Physiol Plant Mol Biol 39: 101-138 "Fatty Acid Metabolism" |
| C15 | Hasslacher M et al (1993) J Biol Chem 268: 10946-10952 "Acetyl-CoA Carboxylase from Yeast is an Essential Enzyme and is Regulated by Factors that Control Phospholipid Metabolism" |
| C16 | Henrikson K P, Allen S H G (1979) J Biol Chem 254: 5888-5891 "Purification and Subunit Structure of Propionyl Coenzyme A Carboxylase of Mycobacterium smegmatis" |
| C17 | Hobbs G et al (1990) J Gen Microbiol 136: 2291-2296 "Pigmented antibiotic production by Streptomyces coelicolor A3(2): kinetics and the influence of nutrients" |
| C18 | Hopwood D A, Sherman D H (1990) Ann Rev Genet 24: 37-66 "Molecular Genetics of Polyketides and its Comparison to Fatty Acid Biosynthesis" |
| C19 | Hunaiti A R, Kolattukudy P E (1982) Arch Biochem Biophys 216: 362-371 "Isolation and Characterization of an Acyl-Coenzyme A Carboxylase from an Erythromycin-Producing Streptomyces erythreus" |
| C20 | Laakel M et al (1994) Microbiol 140: 1451-1456 "A link between primary and secondary metabolism: malonyl-CoA formation in Streptomyces ambofaciens growing on ammonium ions or valine" |
| C21 | Li S J, Cronan, J E Jr (1993) J Bacteriol 175: 332-340 |

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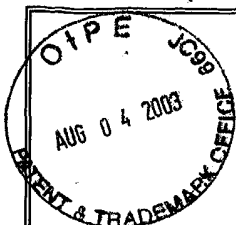
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| | | "Growth Rate Regulation of Escherichia coli Acetyl Coenzyme A Carboxylase, which Catalyzes the First Committed Step of Lipid Biosynthesis" |
| | C22 | Lombo F et al (2001) Biotechnology Progress 17(4): 612-617 "Enhancing the atom economy of polyketide biosynthetic processes through metabolic engineering" |
| | C23 | Murakami T et al (1989) J Bacteriol 171: 1459-1466 "Thiostrepton-Induced Gene Expression in Streptomyces lividans" |
| | C24 | Perez C A et al (1998) Microbiology 144: 895-903 "Effects on Bacillus subtilis of conditional expression of the accBC operon encoding subunits of acetyl coenzyme A carboxylase, the first enzyme of fatty acid synthesis" |
| | C25 | Pizer E S et al (1996) Cancer Res. 56: 2745-2747 "Inhibition of Fatty Acid Synthesis Induces Programmed Cell Death in Human Breast Cancer Cells" |
| | C26 | Polakis S et al (1972) J Biol Chem 247: 1335-1337 "On the Possible Involvement of a Carbonyl Phosphate Intermediate in the Adenosine Triphosphate-dependent Carboxylation of Biotin" |
| | C27 | Redenbach M et al (1996) Mol Microbiol 21: 77-96 "A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome" |
| | C28 | Redenbach et al (1998) DATABASE EMBL 'Online! Streptomyces coelicolor 1C2, AC AL031124 "A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome" XP002195193 abstract |
| | C29 | Rodriguez E, Gramajo H (1999) Microbiology 145: 3109-3119 "Genetic and biochemical characterization of the α and β components of a propionyl-CoA carboxylase complex of Streptomyces coelicolor A3(2)" |
| | C30 | Rodriguez and Gramajo (1999) DATABASE EMBL 'Online! AC AF113603 "Streptomyces coelicolor putative acyl-CoA carboxylase complex A subunit (accA1) gene, complete cds" XP002195260 abstract |

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| C31 | Rodriguez E et al (2001) Applied & Environmental Microbiology 67(9): 4166-4176 "Role of an essential acyl coenzyme A carboxylase in the primary and secondary metabolism of Streptomyces coelicolor A3(2)" |
| C32 | Saggerson E D et al (1992) Adv Enzyme Regul 32: 285-306 "Regulation of Mitochondrial Carnitine Palmitoyl Transferases from Liver and Extrahepatic Tissues" |
| C33 | Strauch E et al (1991) Mol Microbiol 5: 289-298 "The stringent response in Streptomyces coelicolor A3(2)" |
| C34 | Strohl W R (1992) Nucleic Acids Res. 20: 961-974 "Compilation and analysis of DNA sequences associated with apparent streptomycete promoters" |
| C35 | Sun et al (1999) Microbiology 145: 2221-2227 "Green fluorescent protein as a reporter for spatial and temporal gene expression in Streptomyces coelicolor A3(2)" |
| C36 | Westrich L et al (1999) FEMS Microbiol Lett. 170: 381-387 "Cloning and characterization of a gene cluster from Streptomyces cyanogenus S136 probably involved in landomycin biosynthesis" |

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